Terms and Conditions—Adjustable Speed Drive Incentive Program

Program Offer: The Program is available to non-residential customers with products purchased and/or services rendered on or after **January 1, 2010**.

Requirements for ASD Installations:

- The ASD must have either an input line reactor or isolation transformer. The minimum requirement is that a 3% impedance reactor, based on the horsepower rating of the ASD, be installed.
- To be eligible, ASD must be installed on a centrifugal fan in a variable air volume HVAC system or chilled water pump for HVAC system or other use with 3000 hours of operation verified by customer. (with exception of dairy applications)
- The National Electric Code should be followed for all applicable wiring and grounding
- System designer or installing contractor should ensure that the ASD installation meets the Harmonic Test for Eligibility (see below) or ensure that the *entire facility* comply with IEEE Standard No. 519 *after completion* of the ASD installation or retrofit. Failure to comply with this rule may be cause for the utility to deny the request for a rebate.
- In the case of new motor installations, the motor to be controlled must be a NEMA Premium efficiency motor.
- Rebate requests for over $2,500 shall require pre-approval
- The utility must supply electricity to the equipment for which the incentive is being paid. Equipment must be installed on the premises and must not be purchased for resale.

Harmonic Test For Eligibility

1. Enter total ASD load to be supplied by the transformer (include sum of existing ASD loads). Total driven motor HP multiplied by 0.85 is a fair estimate of power in kW…….. _____ kW
2. Enter the kVA rating of the transformer supplying power to the ASD loads ..... _____ kVA
3. Divide line 1 by line 2 and multiply by 100..... _____%
4. If the value on line 3 is less than 5% *(ASD demand is less than 5% of the nameplate kVA of the transformer*), no further evaluation of harmonics is required to qualify the system for this program. This is not a guarantee by the Utility, in any way, that harmonics will not cause any problems for the customer.
5. If the value on line 3 is 0.05 or greater *(ASD demand is equal or greater than 5% of the nameplate kVA of the transformer*), you must pre-qualify this application by using third party verification of measures taken to ensure compliance with the IEEE 519 Standard.

Important

ASDs can be sensitive to overvoltages that can occur when power factor correcting capacitor banks on the utility power system are switched on. To qualify for an incentive payment under this program, each ASD *must* include a series reactor (inductor, choke) in its AC input connections. Your ASD supplier should assist in the sizing of the reactor while meeting the minimum requirement of a 3% impedance reactor, based on the horsepower rating of the ASD.

As a general rule, a 3% reactor is sufficient to avoid misoperation of ASDs during utility capacitor switching and will also help reduce the magnitude of harmonic currents generated by the drive. In some instances your supplier may find it necessary to install 5% reactors and additional filtering devices to meet current and voltage harmonic distortion requirements.

If your power factor is less than 0.8 (80%), we recommend that you consider power factor correction concurrent with the installation of drives, because the presence of power factor correction equipment can influence proper reactor sizing, and because the presence of ASDs can influence the design of power factor correction equipment. In situations where the load from ASDs is a substantial part of the facility load, filters are recommended, rather than capacitors, for power factor correction.

The use of ASDs which incorporate pulse width modulation (PWM) may produce overvoltages which may cause premature failure of AC induction motors not rated for use with an inverter. When installing PWM drives you may consider utilizing inverter rated motors or suitable overvoltage mitigation devices that may include additional line reactors between the drive and the motor. Consider shaft grounding, insulated bearings, load side filters or conductive lubricants to prevent possible bearing frosting or fluting. This is particularly important for installations where the motor will operate in a narrow speed band for long periods of time.

Application and Eligibility Process

The Utility reserves the right to verify sales transactions and to have reasonable access to the customer's facility to inspect pre-existing equipment (if applicable) and the Energy-Efficient Measures installed under this Program, either prior to issuing incentives or at a later time.

An invoice is required and must include specific customer information, including, but not limited to the type, size, make and model, serial number and date of purchase of Energy-Efficient Measures. An authorized representative of the Participating Customer must sign, date, and submit the application with the invoice and the manufacturer's equipment performance sheets.

The Participating Customer must ultimately own the equipment, either through an up-front purchase or at the end of a short-term lease. Equipment procured by customers through another program offered by the Utility may not be eligible for a rebate through this Program.

Warranty Information:

The Utility makes no warranties, expressed or implied, with respect to equipment operation, material, workmanship or manufacturing. The Utility does not guarantee that a certain level of energy or cost savings will result from the use of products covered by this program.

Limitation of Liability:

Participating Customers agree that the Utility's liability, in connection with this Program, is limited to paying the Program Incentive specified (when all Terms and Conditions have been satisfied by the customer). Under no circumstances shall the Utility be liable for any consequential or incidental damages resulting from participation in this Program. The Utility will not be responsible for any tax liability that may be imposed on the customer as a result of the payment of Program Incentives.

Participating Customer's Certification:

Participating Customer certifies that he/she purchased and installed the equipment listed in their application at their defined location served by the Utility. Participating Customer agrees that all information is true and that he/she has conformed to all of the program and equipment requirements listed in the application.

Program Changes/Termination:

While this rebate program will be in effect for an indefinite period, the Utility reserves the right to extend, modify (this includes incentive levels) or terminate this Program without prior or further notice. The customer is responsible for checking with the Utility to determine whether the program has been changed or is still in effect.

Other Conditions

The Utility reserves the right to inspect installations before issuing the rebate. If the application does not comply with the Utility's rules and qualifications, the rebate amount may be adjusted.

Customers must apply for rebates within 6 months of the purchase date (as shown on the customer's invoice). Past eligibility, however, does not guarantee that equipment will meet criteria for current programs in effect.

PLEASE SIGN BELOW IF THIS PAGE WAS NOT PRINTED ON BACK SIDE OF INCENTIVE FORM

System Designer/Installing Contractor Signature **Date**

Customer Signature **Date**

Adjustable Speed Drive Incentive Program

PRE-APPROVAL APPLICATION

The purpose of this pre-approval form is to assure the Utility and the customer that the Adjustable Speed Drive (ASD) installer and the engineer or other persons responsible for specifying the equipment and its installation are familiar with the terms and conditions that must be met to ensure eligibility for rebates made available through the ASD Program.

Customers should request that the specifying engineer/individual and installing contractor read and sign this document prior to installation to ensure that the installed ASD will qualify for a rebate through this program.

Failure to complete this pre-approval form, may result in the denial of a rebate requests made by the customer upon completion of the ASD installation.

Send a completed copy of this pre-approval form to the utility for pre-approval of this project prior to equipment installation to ensure full payment of the requested rebate.

CUSTOMER INFORMATION

Company	Account Number	Phone	
Facility Address (equipment location)	City	State	Zip
Mailing Address (if different than facility address above)	City	State	Zip

First Name (contact person)	Last Name	E-mail Address

VENDOR or ASD SYSTEM DESIGNER (person responsible for final specification of ASD equipment to be installed)

Agreement of Understanding:

By signing below, I acknowledges that:

- I have read and understood the information and requirements on the Terms and Conditions for the ASD
- all equipment being specified does satisfy the requirements for the type of incentives under consideration.
- The system specified is appropriate for the application and meets applicable codes, standards and regulatory requirements
- the electric utility will be notified of any design specification changes

I also agree that the proposed system (check one of the following):

___ meets the Harmonics Test for Eligibility (below)

___ is based on a complete and thorough analysis of the affected electrical system to establish compliance with the IEEE 519 Standard in regard to harmonics once the Adjustable Speed Drive system(s) is in place.

Signature _____ Date _____

Project Information:

Application (fan, pump, etc.) _____ Expected Completion Date _____

Approximate Horsepower to be controlled _____ Estimated ASD Project Cost _____

Harmonic Test For Eligibility:

1. Enter total ASD load to be supplied by the transformer (include sum of existing ASD loads). Total driven motor HP multiplied by 0.85 is a fair estimate of power in kW. ..... _____ kW
2. Enter the kVA rating of the transformer supplying power to the ASD loads ..... _____ kVA
3. Divide line 1 by line 2 ..... _____
4. If the value on line 3 is less than .05 *(ASD demand is less than 5% of the nameplate kVA of the transformer*), no further evaluation of harmonics is required to qualify the system for this program. This is not a guarantee by the Utility, in any way, that harmonics will not cause any problems for the customer.
5. If the value on line 3 is .05 or greater *(ASD demand is equal or greater than 5% of the nameplate kVA of the transformer*), you must pre-qualify this application using third party verification showing measures that will be taken to ensure compliance with the IEEE 519 Standard.

Utility Use Only:

Pre-Installation Verification _____ _____/_____/_____ Pre-Approved Incentive $_____

Technical Review _____ _____/_____/_____ Utility Pre-Approval _____ _____/_____/_____

Post-Installation Verification _____ _____/_____/_____